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Agriculture

Forest
Service

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Environmental Assessment

Proposed Blue Gill Mine OQC-292

**Jessieville-Winona-Fourche Ranger District, Ouachita National Forest
Garland County, Arkansas**

Section 10, T2N, R17W

This project is subject to subparts A and B of *36 CFR Part 218 Project-Level Pre-decisional Administrative Review Process* (objection process); it is not authorized under the Healthy Forest Restoration Act (HFRA).

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<https://www.fs.usda.gov/project/?project=60834>

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INTRODUCTION

Purpose and Need for Action

The purpose of this project is to allow the extraction of quartz from the permitted area as required by 36 CFR 228C. According to the Mining and Minerals Policy Act of 1970, it is the continuing policy of the federal government to foster and encourage private enterprises in the exploration, development and production of mineral and energy resources. This action is needed, because the permittees were awarded the contract and have completed their approved exploration activities, and now wish to expand their operations beyond the exploration phase, to remove quartz crystal from the tract. This action responds to the goals and objectives outlined in the Ouachita National Forest Revised Land and Resource Management Plan (Revised Forest Plan).

Proposed Action

The Forest Service proposes to allow quartz mining to occur on an area previously approved for quartz prospecting. The proposed 53 acre quartz mine is in Section 10, Township 2 North, Range 17 West, Garland County, Arkansas.

Issues

The Forest Service identified two (internal) issues during scoping:

- Mining activities may reduce lands suitable for timber production.
- Mining activities resulting in top soil removal and stock piling may compromise soil productivity.

Background

Approval for prospecting was issued September 9, 2020. Permittees would now like to mine the area. Tribes were consulted prior to prospecting via Heritage Survey Report OUA-529. Scoping for this Environmental Assessment (EA) occurred June 16, 2021 in conjunction with an additional nomination (OQC-304P) and they are being analyzed separately in separate EAs.

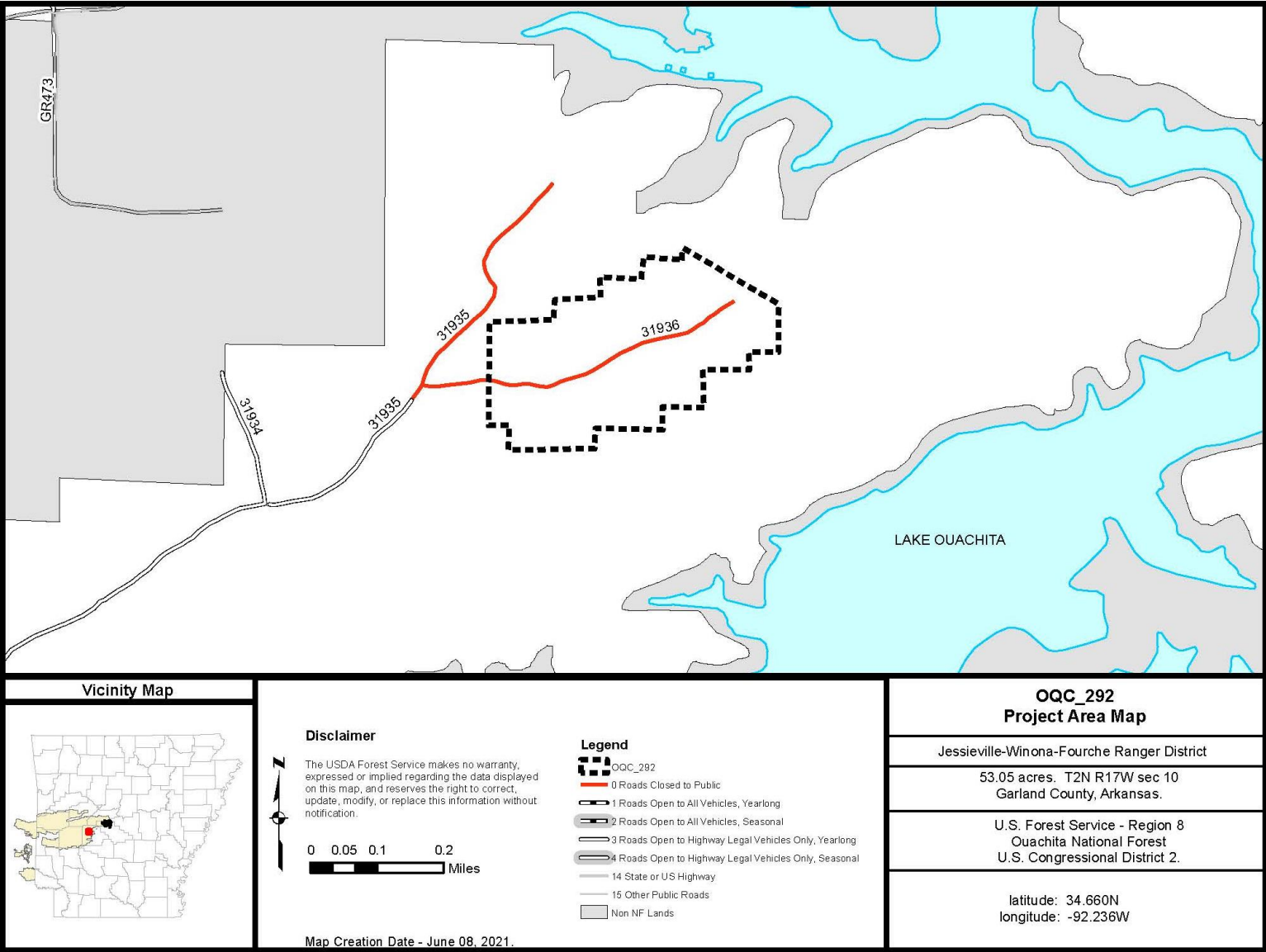
ALTERNATIVES, INCLUDING THE PROPOSED ACTION

Alternatives

Alternative 1

The Proposed Action

The Forest Service proposes to allow quartz mining to occur on 53 acres in Section 10, T1S, R21W of Garland County. Due to the location of the mine, in the Lake Ouachita Management Area (MA 16), the mining operations would occur on less than two acres at any one time. Timber and vegetation would be removed with mining progression. Timber impacted by mining operation would be sold using the most appropriate method of disposal. Top soil removed would be retained and



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Figure 1. Proposed Action.

used during reclamation. Restoration of the area would include re-shaping the land to the natural contours of the surrounding terrain. The area would be revegetated and maintained with a site-specific seed mixture and fertilization plan. Tree seedlings would be replanted until adequately stocked. FS Road 31935 provides access to the site. For security of the site and equipment, FSR 31936 would be gated and closed at the intersection of with FSR 31935.

Project Design Criteria

The following measures are incorporated in the proposed action to reduce or avoid project-related impacts.

16.06 Minerals operation may be conducted where they are not visible from the lake and will not have more than two acres of unreclaimed surface impact during active mining. Impact area must be reclaimed during inactive operating periods that will exceed 30 days. (Revised Forest Plan, p. 110)

Appendix B – Minerals

Require appropriate mitigation and reclamation of environmental disturbance for all mineral exploration and development proposals to achieve the planned uses specified in the Forest Plan, when those lands are no longer needed for mineral operations. Reduce environmental effects from past mineral-related activity. (Revised Forest Plan, p. 155)

ENVIRONMENTAL CONSEQUENCES

Project Issue Effects

Issue: Mining activities may reduce lands suitable for timber production.

The 53 acre contracted area in compartment 646 stand 18 has a National Forest System (NFS) Land Class of 640, which is suitable for timber production. This contract may be renewed every five years into perpetuity, taking this area out of timber production. The NFS Land Class would be changed to 240, an unsuitable NFS Land Class so this acreage would no longer be part of the suitable land base; it would be reduced by 53 acres.

Issue: Mining activities resulting in top soil removal and stockpiling may compromise soil productivity.

The depth of the stockpile and the length of time it is stored affects the quality of the soil at replacement (Strohmayer, 1999). In order to retain soil productivity, topsoil should be stockpiled for as short a time period as possible, and topsoil piles should be as shallow as possible. Since the contracted area would be classified as unsuitable, soil productivity would no longer be a concern for timber production.

Management Indicator Species (MIS) and Habitat

The entire list of 24 MIS was reviewed and a subset was selected for this project. The MIS selected include 6 terrestrial species and 12 fish species. Species not known to

occur within the action area, lacking suitable habitat, or not tied to an appropriate evaluation objective were not selected, as indicated in the far right column of the table below.

Potentially Affected Management Indicator Species

| Life | Common Name | Scientific Name | Selected? |
|--------|-------------------------|-------------------------------|-----------|
| Mammal | White-tailed deer | <i>Odocoileus virginianus</i> | Yes |
| Bird | Northern Bobwhite | <i>Colinus virginianus</i> | Yes |
| Bird | Eastern Wild Turkey | <i>Meleagris gallapavo</i> | Yes |
| Bird | Red-cockaded Woodpecker | <i>Dryobates borealis</i> | No |
| Bird | Pileated woodpecker | <i>Dryocopus pileatus</i> | Yes |
| Bird | Scarlet Tanager | <i>Piranga olivacea</i> | Yes |
| Bird | Prairie Warbler | <i>Dendroica discolor</i> | Yes |
| Fish | Largemouth bass | <i>Micropterus salmoides</i> | Yes |
| Fish | Smallmouth bass | <i>Micropterus dolomieu</i> | Yes |
| Fish | Bluegill sunfish | <i>Lepomis macrochirus</i> | Yes |
| Fish | Redear sunfish | <i>Lepomis microlophus</i> | Yes |
| Fish | Yellow bullhead | <i>Ameiurus natalis</i> | Yes |
| Fish | Highland stoneroller | <i>Campostoma spadiceum</i> | Yes |
| Fish | Redfin darter | <i>Etheostoma whipplei</i> | Yes |
| Fish | Green sunfish | <i>Lepomis cyanellus</i> | Yes |
| Fish | Longear sunfish | <i>Lepomis megalotis</i> | Yes |
| Fish | Johnny darter | <i>Etheostoma nigrum</i> | No |
| Fish | Orangebelly darter | <i>Etheostoma radiosum</i> | No |
| Fish | Channel darter | <i>Percina copelandi</i> | No |
| Fish | Pirate perch | <i>Aphredoderus sayanus</i> | No |
| Fish | Creek chubsucker | <i>Erimyzon oblongus</i> | Yes |
| Fish | Northern Studfish | <i>Fundulus catenatus</i> | No |
| Fish | Northern hog sucker | <i>Hypentilium nigricans</i> | Yes |
| Fish | Striped shiner | <i>Luxilus chrysocephalus</i> | Yes |

All species of mammal and bird that occur within the project area during activities could be disturbed. If activities take place during nesting season, nests could be disturbed or destroyed.

Actions involving quartz extraction could result in a loss of approximate 53 total acres of mature forest habitat and an increase of the same in early seral habitat, through future reclamation of the site. Due to the limited area of impacts, this change in habitat is anticipated to have minimal indirect effects on any of these terrestrial MIS species. Aquatic species were selected based on their regional MIS category in the Revised Forest Plan Environmental Impact Statement (USDA Forest Service, 2005b)). If the species do not occur in the streams, they were given a NO selection in the table. Direct, indirect, and cumulative effects to aquatic MIS species would be the same as those determined for PETS fish species.

Public Health or Safety

The purchaser is required to install fencing material and hazard warning signs around highwalls to block free access to the edge of the working faces. The fencing would be at least ten horizontal feet from any highwall or other area of instability. For security of the site and equipment, FSR 31936 would be gated and closed at the intersection of with FSR 31935.

Unique Characteristics of the Geographic Area

There are no park lands, prime farmlands, wetlands, roadless areas, wild and scenic rivers, wilderness, or ecologically critical areas nearby.

The project area is in Management Area 16 – Lake Ouachita Area. Special considerations for viewshed were made to ensure mine would not be visible from the lake. The active mining area would be limited to 2 acres at a time.

The effects on historic and cultural resources are disclosed on page 5.

Quality of the Human Environment

The effects of the proposed activities are not known to be controversial in the scientific community.

Uncertainty

There are no effects that are highly uncertain or involve unique or unknown risks. The project is not unique or unusual. The Forest Service has experience implementing similar actions in similar areas. The environmental effects to the human environment are analyzed in this EA.

Precedent for Future Actions

This project neither establishes a precedent nor represents a subsequent decision in principle about future actions. Quartz mining has been occurring for many years. A decision to allow quartz mining to occur on an existing quartz contract would not limit later resource management decisions.

Cumulative Effects

The spatial bounds of effects from this project are the 53 acres of ground impacted by quartz mining activities. There are no other activities planned, at this time, that would occur during the same time or place as the mining activity. There are no other past or ongoing activities that would result in additive effects with this project.

Cultural Resources

This project would occur in areas previously surveyed. As documented in Heritage Survey Report OUA-529, there are no known archeological sites located within or near the project; there are no known National Register of Historic Places (NHRP) sites located within or near the project area. The proposed action would have no effect on historic

properties or cause loss or destruction of cultural resources. Consultation with the State Historic Preservation Office (SHPO) and Native American Tribes was conducted for the entire project area during the initial evaluation of the area when nominated. SHPO Concurrence was received August 12, 2020 (AHPP Tracking Number 106147). Tribal consultation concluded in September 2020.

Threatened, Endangered, and Sensitive Species

All 80 PETS species were considered. The US Fish and Wildlife Service (FWS) list of Endangered and Threatened Wildlife and Plants, Arkansas Natural Heritage Commission (ANHC) inventories of PETS species (2007, 2018), and Forest and District records were all examined for potential PETS species locations. Eighteen species being within or potentially within the proposed analysis areas were evaluated in the OQC-292 in Biological Evaluation (BE) dated Sept. 20, 2021.

Threatened, Endangered, & Sensitive Species evaluated

| Group | Common Name | Scientific Name | Status |
|----------------|-------------------------|---------------------------------|------------|
| Mammal | Northern Long-eared bat | <i>Myotis septentrionalis</i> | Threatened |
| Mammal | Tricoloured bat | <i>Perimyotis subflavus</i> | Sensitive |
| Insect | Monarch butterfly | <i>Danaus plexippus</i> | Sensitive |
| Insect | Frosted Elfin | <i>Callophrys irus</i> | Sensitive |
| Bird | Bachman's Sparrow | <i>Peucaea aestivalis</i> | Sensitive |
| Vascular Plant | Kentucky Lady's slipper | <i>Cypripedium kentuckiense</i> | Sensitive |
| Vascular Plant | Ouachita false indigo | <i>Amorpha ouachitensis</i> | Sensitive |

For detailed discussion of species see the BE. Informal consultation was initiated for two threatened species with the FWS. This project is “likely to adversely affect” the NLEB and “may affect, but is not likely to adversely affect” the Arkansas fatmucket.

Northern long-eared bat (*Threatened*): This project *is likely to adversely affect* the NLEB; however, there are no effects beyond those previously disclosed in the programmatic biological opinion on implementing the final 4(d) rule dated January 5, 2016, signed by Lynn Lewis. Any taking that may occur incidental to this project is not prohibited under the final 4(d) rule (50 CFR §17.40(o)). This project is consistent with the forest plan, the description of the proposed action in the programmatic biological opinion, and activities that do not require special exemption from taking prohibitions applicable to the NLEB; therefore, the Programmatic Biological Opinion (PBO) satisfies the Forest Service's responsibilities under Endangered Species Act (ESA) section 7(a) (2) relative to the NLEB for this project.

Sensitive species covered in the BE with the determination of “may impact individuals but is not likely to cause a trend to federal listing or a loss of viability” are the Tri-colored bat, Bachman's sparrow bird, Frosted Elfin butterfly, Monarch butterfly, Kentucky Lady's slipper plant and Ouachita false indigo plant.

Proposed mine OQC – 292, is less than 0.25 miles from Lake Ouachita.

The potential clearing of this many acres of mostly mature forest would cause the same effects as those determined in the aquatics PETS section of the BE. Effects from mining operations could result from removing vegetative cover, concentrating runoff, and increasing sedimentation into streams potentially impacting water quality. The proposed mining site is located in compartment 646 (OQC-292) on the Jessieville Unit of the Jessieville Winona Fourche (JWF) Ranger District.

Site OQC-292 consists of immature (pole) Loblolly pine with some scattered mature Loblolly pine and sparse hardwood understory and pine needle groundcover with predominantly south facing slopes.

No mining is permitted within Management Area 9 (Water & Riparian Areas), as defined by the Revised Forest Plan.

Operations shall be conducted to prevent debris from entering streams.

Federal, State, or Local Laws

The proposed actions would not violate any known Federal, State, or local law or requirement imposed for the protection of the environment. They are consistent with the Revised Forest Plan and applicable policies and programs.

CONSULTATION AND COORDINATION

The Forest Service consulted the following individuals, Federal, State, and local agencies, tribes and non-Forest Service persons during the development of this environmental assessment:

ID TEAM MEMBERS:

| | |
|------------------|--|
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| Wyatt Palin | Fire Management Officer |
| Damon Godwin | Roads |
| Paula Homan | NEPA Coordinator |
| Rhonda Huston | Wildlife Biologist |
| Andrew McCormick | Forest Geologist |
| Mary Lynn Mentz | Wildlife Biologist |
| Hunter Speed | Silviculturist |
| Charles Kilgore | Geographic Information System Technician |

FEDERAL, STATE, AND LOCAL AGENCIES:

US Fish & Wildlife Service

TRIBES:

Quapaw Tribe of Oklahoma

The Osage Nation

Caddo Nation of Oklahoma